

HONORABLE MICHELLE L. PETERSON

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UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

WILD FISH CONSERVANCY,)
)
Plaintiff,)
)
v.)
)
SCOTT RUMSEY, *et al.*,)
)
Defendants.)
)
_____)

Case No. 2:20-cv-00417-RAJ-MLP

THIRD DECLARATION OF DR.
DEBORAH GILES, Ph.D.

I, Deborah Giles, declare the following:

- 1. I am over eighteen years of age. I have personal knowledge of the facts contained in this declaration and am otherwise competent to testify to the matters in this declaration.
- 2. I previously prepared the Declaration of Dr. Deborah Giles, Ph.D. submitted to the Court on April 16, 2020 as Dkt. No. 14-2 (“First Giles Declaration”). I also previously prepared the Declaration of Dr. Deborah Giles, Ph.D. submitted to the Court on May 5, 2021 as Dkt. No. 91-3 (“Second Giles Declaration”). The First Giles Declaration and the Second Giles Declaration described my professional qualifications and the work I performed and the opinions I had developed for this matter up until the dates they were submitted. Instead of repeating those efforts, I incorporate them herein with this reference. Except where expressed otherwise below, I

1 continue to hold the opinions expressed in the First Giles Declaration and Second Giles
2 Declaration.

3 3. In preparing this declaration, in addition to drawing on my knowledge and
4 experience, I have considered the following materials since submitting the First Giles
5 Declaration and the Second Giles Declaration:

6 a. State of Washington, Washington Department of Fish and Wildlife, *Rule-*
7 *Making Order, Emergency Rule, Wash. State Reg. 22-14-068* (June 30, 2022), attached hereto as
8 Exhibit A;

9 b. Government of Canada, *News Release: Minister Jordan Announces Long-*
10 *Term Commercial Closures and License Retirement Program in Effort to Save Pacific Salmon,*
11 [https://www.canada.ca/en/fisheries-oceans/news/2021/06/minister-jordan-announces-long-term-](https://www.canada.ca/en/fisheries-oceans/news/2021/06/minister-jordan-announces-long-term-commercial-closures-and-licence-tetirement-program-in-effort-to-save-pacific-salmon.html)
12 [commercial-closures-and-licence-tetirement-program-in-effort-to-save-pacific-salmon.html](https://www.canada.ca/en/fisheries-oceans/news/2021/06/minister-jordan-announces-long-term-commercial-closures-and-licence-tetirement-program-in-effort-to-save-pacific-salmon.html)
13 (June 29, 2021), attached hereto as Exhibit B;

14 c. Government of Canada, *2022 Management Measures to Protect Southern*
15 *Resident Killer Whales*, [https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-](https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/srkw-measures-mesures-ers-eng.html#overview)
16 [baleines/srkw-measures-mesures-ers-eng.html#overview](https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/srkw-measures-mesures-ers-eng.html#overview), attached hereto as Exhibit C;

17 d. Wasser SK, Lundin JI, Ayres K, Seely E, Giles D, Balcomb K, et al.
18 (2017) Population growth is limited by nutritional impacts on pregnancy success in endangered
19 Southern Resident killer whales (*Orcinus orca*). PLoS ONE 12(6): e0179824.
<https://doi.org/10.1371/journal.pone.0179824>;

20 e. Nielsen, MLK, Ellis, S, Towers, JR, et al. A long postreproductive life
21 span is a shared trait among genetically distinct killer whale populations. *Ecol Evol.* 2021;
22 11:9123–9136. <https://doi.org/10.1002/ece3.7756>;

23 f. Stewart, J. D., Durban, J. W., Fearnbach, H., Barrett-Lennard, L. G.,
24 Casler, P. K., Ward, E. J., and Dapp, D. R. 2021. Survival of the fattest: linking body condition
25

1 to prey availability and survivorship of killer whales. *Ecosphere* 12(8):e03660.

2 10.1002/ecs2.3660; and

3 g. Couture F, Oldford G, Christensen V, Barrett-Lennard L, Walters C
4 (2022) Requirements and availability of prey for northeastern pacific southern resident killer
5 whales. *PLoS ONE* 17(6): e0270523. <https://doi.org/10.1371/journal.pone.0270523>.

6 4. As of September 2, 2022, there are just 73 members of the endangered Southern
7 Resident killer whale (“SRKW”) population, down from a high of 98 in 1995. Despite their
8 Endangered Species Act listing in 2005, the ongoing population decline continues—
9 notwithstanding the National Marine Fisheries Service’s (“NMFS”) SRKW Recovery Plan goal
10 of 2.3% population growth per year.

11 5. A healthy population of killer whales should produce six to seven new calves per
12 year. Since 2019 just seven calves have been born in total to the SRKW.

13 6. Only two new calves have been born since the Second Giles Declaration was filed
14 nearly one and a half years ago—J59 and K45. At least five additional pregnancies have been
15 identified over the last two years with no evidence of calves being born, with the other five
16 calves assumed to have been lost.

17 7. As mentioned in the First Giles Declaration and Second Giles Declaration, in
18 2017, I co-authored a research paper that showed that 69% of these pregnancies are aborted due
19 to insufficient Chinook salmon. This alarming trend appears to continue, and given that a
20 significant number of these losses are late stage pregnancies, I cannot overstate the adverse
21 effects of both physical and emotional stress on the mothers’ health from insufficient food. Some
22 of these females can be described as chronically pregnant—carrying a fetus for over a year, and
23 then becoming pregnant again the following year after miscarrying their previous fetus. This
24 burden is likely contributing to premature deaths of females in their forties. The premature death
25 of females in their forties is significant because this population relies heavily on these
postmenopausal “grandmother” whales. In fact, a grandmother’s presence in a pod increases the

1 likelihood of her daughter’s offspring surviving because she helps with maternal care, food
2 sharing, and more. This benefit has been calculated at over four times greater in a pod with a
3 living grandmother, than in one without.

4 8. Since my previous declarations, the Center for Whale Research has identified two
5 whales—L89, known as Solstice, and K44, known as Ripple—as missing. As neither have been
6 seen with their families since November 2021, I believe we must presume these whales died last
7 year, when considering the current population health issues due to the ongoing impacts of
8 insufficient Chinook salmon.

9 9. L89, a 29-year-old male, is considered prime age, and is important for future
10 breeding success, as females selectively choose older, larger males. K44 conversely is an 11-
11 year-old male, not yet sexually mature, but every whale lost in this population matters. Neither of
12 these whales had previously shown any indication of illness through observations and were not
13 flagged as whales of concern in 2021.

14 10. On June 30, 2022, the Washington Department of Fish and Wildlife (“WDFW”)
15 issued an emergency order preventing vessels from coming within 0.5 nautical miles of the
16 SRKW, as WDFW had designated 13 members of the population as “vulnerable.” WDFW
17 designated these members as “vulnerable” based on observations and analysis of J and L pods
18 collected by the SeaLife Response Rehabilitation and Research (“SR3”) team between
19 September 2021 and April 2022. K pod was not witnessed during this time frame, so their body
20 condition could not be assessed. *See* Ex. A.

21 11. This year, one pregnant whale is on the vulnerable list—L72, known as Racer,
22 and WDFW also designated 12 whales as vulnerable whose body condition is assessed as falling
23 into the lowest 20% of measurements for age and sex, including showing signs of emaciation.
24 Specifically, SR3 researchers found that six females and six males from J and L pod fit this
25 “poor condition” classification, and noted that, “the best available science suggests that whales
measured to be in [this] state had a significantly increased (two to three times higher) probability

1 of subsequent mortality.” *See* Ex. A. Further, one of the whales designated as vulnerable because
2 of her poor condition, L83, is also pregnant.

3 12. The six females range in age from 3-year-old J56, known as Tofino, to 45-year-
4 old L54, known as Ino. Of concern is that four of these females have calves, including L83 who
5 is also currently pregnant. This is of concern because the loss of mothers has a devastating
6 impact on the rest of the family, as they nurse the young and share food with family members,
7 even including fully mature adult males. This ensures all family members, but especially males
8 are fit for breeding.

9 13. The six males range in age from 10-year-old J49, known as T'ilem I'nges, to 31-
10 year-old J27, known as Blackberry. J27 is one of three males of this age cohort, and they are
11 currently the oldest males surviving whales in this population. Males were previously expected
12 to live into their 50s, but in recent years, 30 is now considered old. Yet paternity tests show that
13 males over the age of 40 have been sires of calves in the past. Of particular concern is that five of
14 the males in poor condition are under 15 years old, similar in age to K44 who is currently
15 missing. This is alarming because losing males before they get to reproductive age shrinks the
16 gene pool, thereby increasing risks associated with inbreeding. It is also of concern because
17 losing so many males that are around the same age can create a gap in the cohort of males to
18 mature to the age and size large and desirable for breeding. When that happens, females will
19 need to mate with less desirable males, which can adversely impact population health.

20 14. In addition to the 13 whales classified as vulnerable, SR3 flagged two seven-year-
21 olds as underdeveloped, and small for their age, thus creating concern for over 15 individuals in
22 total: that is 20% of the population and is simply unprecedented. What is more concerning is that
23 this statistic does not even consider or designate whales of concern for members of K pod
24 because they had not been in inland waters in recent months and therefore could not be assessed
25 by SR3. Based on current conditions and K44 being missing, it is my opinion that well over 20%
of the SRKW population may qualify as being classified as vulnerable.

1 15. On June 29, 2021, Fisheries and Oceans Canada—NMFS’s agency counterpart—
2 announced long-term commercial fisheries closures and a fishery license retirement program to
3 reduce fishing pressure on stocks of conservation concern in an effort to save Pacific salmon
4 pursuant to the Pacific Salmon Strategy Initiative, which has an allocated funding of \$647.1
5 million. *See Ex. B.*

6 16. In 2021, this corresponded with Fisheries and Oceans Canada ordering the
7 closures of nearly 60% of its commercial salmon fisheries. To mitigate economic impacts, a
8 voluntary salmon license retirement program was made available to commercial fisheries to
9 retire their licenses at fair market value, with a goal also to transition to a smaller commercial
10 fishing sector. *See Ex. B.*

11 17. This announcement came in tandem with Canada’s first implementation of a new
12 pilot program of management measures to protect the SRKW by closing selected Gulf Island
13 fisheries after the first confirmed presence of the SRKW in these waters. On July 1, 2021,
14 members of K pod briefly returned to the Salish Sea, triggering closures from July 4 until
15 October 31. In 2022, these area-based fishery closures for commercial and recreational salmon
16 are in place again since the arrival of J pod in the Salish Sea on May 27 and will be in force until
17 October 31. *See Ex. C.*

18 18. It is my professional opinion that SRKW, under existing conditions, are not
19 getting enough Chinook salmon throughout their entire range. Overall conditions appear to have
20 worsened as Chinook returns through the Salish Sea, but also to the Columbia River Basin, have
21 been insufficient to maintain their daily prey energy requirements throughout the past few years.
22 I believe SRKW need an immediate increase in the abundance of Chinook available to them to
23 avoid functional extinction, as the current low birth rate, with high early mortality is simply
24 unsustainable.
25

1 I declare under penalty of perjury under the laws of the United States of America that the
2 foregoing is true and correct.

3 Executed this 6 day of September 2022.

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7 Deborah Giles, Ph.D.
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Exhibit A

CODE REVISER USE ONLY



RULE-MAKING ORDER EMERGENCY RULE ONLY

CR-103E (December 2017) (Implements RCW 34.05.350 and 34.05.360)

OFFICE OF THE CODE REVISER
STATE OF WASHINGTON
FILED

DATE: June 30, 2022

TIME: 8:29 AM

WSR 22-14-068

Agency: Washington Department of Fish and Wildlife (WDFW)

Effective date of rule:

Emergency Rules

- Immediately upon filing.
 Later (specify) _____

Any other findings required by other provisions of law as precondition to adoption or effectiveness of rule?

- Yes No If Yes, explain:

Purpose: The Southern Resident killer whales (SRKW) are a distinct population segment of North Pacific killer whales. The SRKW have a high risk of extinction and are classified as endangered under the Endangered Species Act, and their listing was reaffirmed by NOAA in January of 2022. They also are listed as endangered at the State level, and orca are identified as a Species of Greatest Conservation Need under the State Wildlife Action Plan. The SRKW are comprised of three family groups (pods): J pod, K pod, and L pod. Each individual whale has an alpha-numeric identifier that corresponds with its pod and birth order. Because individual whales are identifiable and documented, the health and status of each whale can be measured and tracked over time.

In June of 2022, the SeaLife Response Rehabilitation and Research (SR3) team contracted by WDFW to monitor Southern Resident killer whale (SRKW) body condition concluded their analysis of SRKW observations collected between September 2021 and April 2022.

Body Condition: SR3 uses measurements taken from drone photographs and statistical analyses detailed in Stewart et al. (2021) to identify whales in poor condition, which means the orca's body condition falls in the lowest 20% of measurements for their age and sex compared to comparable measurements from 2016-2022. This lowest body condition state is classified as "BC1." The best available science suggests that whales measured to be in the "poor condition" state had a significantly increased (2-3 times higher) probability of subsequent mortality.

There were 12 whales in the BC1 state from J and L pods, including one calf (C), one adult male (M), five adult females (F), one juvenile (J) and four sub-adult males (S): J27(M), J36(F), J44(S), J49(J), J56(C), L54(F), L83(F), L90(F), L94(F), L110(S), L116(S), and L117(S).

This includes six whales that were measured to be in BC1 in both September 2021 and fall-spring 2022, plus an additional L pod female (L94) that was not imaged in September. Additionally, there were four whales which have declined into poor condition since September and are now listed as BC1 (J27, J44, J49, L90). L54 was not imaged in the fall-spring 2022 period, but is on the list because she was measured to be BC1 when last imaged in September 2021. Typically, when the Southern Residents return to the Salish Sea in the spring, they are significantly leaner than in the fall (Fearnbach et al. 2019), and thus we have no reason to believe that L54's condition has improved. No K pod whales were imaged in the fall-spring 2022 period, but none were measured to be in BC1 in September 2021 when all were imaged.

Late-Stage Pregnancy: There is a high rate of failed pregnancies in SRKW (Wasser et al. 2017), and failed pregnancy can be lethal (Raverty et al. 2020). Late-stage pregnancy requires more food, as much as 25% in the final month of gestation (Kriete 1995). Vessels compound food stress, particularly for females (Holt et al. 2021). SR3 analyzed all of the female SRKW of reproductive age (33 whales, ages >8 and <50) to identify any whales that may be pregnant, and particularly any in the latter half of pregnancy ($p > 0.75$ probability of being within 9

months of birth, out of an approximately 17-month gestation period). Four females were determined to fall in this classification when last measured: K12, K20, K27, and L72. Recent online videos show a young calf traveling with K pod, and most likely one of K12, K20, or K27 is the mother. These K pod whales were last measured in September 2021, so we expect these pregnancies may have ended as of late June 2022. However, if these whales are encountered and still exhibit signs of late-stage pregnancy, an emergency rule at that time will be warranted. Currently, we expect L72 remains in late-stage pregnancy, meriting vulnerable status. As a reminder, calves and their mothers receive extra protection via WAC 220-460-110, which prohibits motorized commercial whale watching vessels from approaching within one-half nautical mile of a group of SRKW that contains a calf of under one year of age.

Other Factors: Beyond the factors described here, WDFW may determine a whale is vulnerable based on other criteria. For example, whales showing signs of illness or injury (emaciated appearance, collapsed dorsal fin, lacerations, entanglement, vessel strike, etc.) would merit extra protection. Additionally, whales that exhibit a dramatic or sudden decline in body condition (for example, dropping two body condition states over a short period of time) or calves that show constrained growth may raise cause for alarm and merit a vulnerable status designation. At this time, no whales beyond those described above are being designated as vulnerable.

Per WAC 220-460-110, the department is adopting an emergency rule to designate J27, J36, J44, J49, J56, L54, L83, L90, L94, L110, L116, L117, and L72 as vulnerable and thereby prevent commercial whale watching operators from approaching these individuals or a group containing any of these individuals within 0.5 nautical mile. This designation and the additional distance is necessary to ensure that the ability of these whales to survive is not hindered by the presence of vessels.

Citation of rules affected by this order:

New: WAC 220-460-110D
 Repealed:
 Amended:
 Suspended:

Statutory authority for adoption: RCW 77.65.620

Other authority:

EMERGENCY RULE

Under RCW 34.05.350 the agency for good cause finds:

- That immediate adoption, amendment, or repeal of a rule is necessary for the preservation of the public health, safety, or general welfare, and that observing the time requirements of notice and opportunity to comment upon adoption of a permanent rule would be contrary to the public interest.
- That state or federal law or federal rule or a federal deadline for state receipt of federal funds requires immediate adoption of a rule.

Reasons for this finding: The imminent risk to an endangered species requires additional protection immediately. This emergency action is necessary to protect the public’s interest in the preservation of a vulnerable endangered animal.

**Note: If any category is left blank, it will be calculated as zero.
 No descriptive text.**

**Count by whole WAC sections only, from the WAC number through the history note.
 A section may be counted in more than one category.**

The number of sections adopted in order to comply with:

Federal statute:	New	_____	Amended	_____	Repealed	_____
Federal rules or standards:	New	_____	Amended	_____	Repealed	_____
Recently enacted state statutes:	New	_____	Amended	_____	Repealed	_____

The number of sections adopted at the request of a nongovernmental entity:

New ____ Amended ____ Repealed ____

The number of sections adopted on the agency's own initiative:

New 1 Amended ____ Repealed ____

The number of sections adopted in order to clarify, streamline, or reform agency procedures:

New ____ Amended ____ Repealed ____

The number of sections adopted using:

Negotiated rule making:	New	____	Amended	____	Repealed	____
Pilot rule making:	New	____	Amended	____	Repealed	____
Other alternative rule making:	New	____	Amended	____	Repealed	____

Date Adopted: June 30, 2022	Signature: 
Name: Kelly Sussewind	
Title: Director, WDFW	

NEW SECTION

WAC 220-460-110D Southern Resident Killer Whales J27, J36, J44, J49, J56, L54, L83, L90, L94, L110, L116, L117, and L72

In conjunction with WAC 220-460-110(2), the department designates the Southern Resident Killer Whales J27, J36, J44, J49, J56, L54, L83, L90, L94, L110, L116, L117, and L72 as vulnerable individuals.

Exhibit B



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Canada.ca > [Fisheries and Oceans Canada](#)

Minister Jordan announces long-term commercial closures and Licence Retirement Program in effort to save Pacific Salmon

From: [Fisheries and Oceans Canada](#)

News release

June 29, 2021

Vancouver, British Columbia – Pacific salmon are in a long-term decline, with many runs on the verge of collapse. The Government of Canada is taking decisive steps under the Pacific Salmon Strategy Initiative (PSSI) to combat these steep declines and give salmon a fighting chance at survival. The decades-long declines are due to a complex combination of climate change, habitat degradation, and harvesting impacts, and bold action is needed now to stabilize and rebuild the stocks before it is too late.

Today, the Honourable Bernadette Jordan, Minister of Fisheries, Oceans and the Canadian Coast Guard, announced an initial step towards longer-term reductions in fishing pressure on stocks of conservation concern with significant commercial salmon closures for the 2021 season. These closures, affecting Commercial salmon fisheries and First Nations Communal Commercial fisheries, will further reduce pressure on salmon stocks and will

be included in the 2021-22 Pacific Salmon Integrated Fisheries Management Plan. These conservation-driven management decisions will provide strong protection for the most fragile stocks of concern across the Pacific region.

New data from the North Pacific Anadromous Fish Commission (NPAFC), for which Canada is a member, shows that the global catch of Pacific salmon in 2020 was the lowest since 1982. Strong management measures will be in place for all salmon fishing sectors in 2021, and are in line with a precautionary approach based on conservation and sustainability. These plans are outlined in the 2021-2022 Salmon Integrated Fisheries Management Plan and will result in closures to nearly 60 per cent of commercial salmon fisheries for the 2021 season.

Understanding that stocks may need multiple generations to stabilize and rebuild, and that these closures will have an economic impact on harvesters, the Minister is also announcing the Pacific Salmon Commercial Transition Program. This voluntary salmon licence retirement program will provide harvesters with the option to retire their licences for fair market value and will facilitate the transition to a smaller commercial harvesting sector.

Permanently removing fishing effort will support the economic viability of the fishery in the long term, while closures will protect salmon stocks and give them an opportunity to stabilize.

For First Nations communal-commercial harvesters, the Department will meaningfully consult on options to shift to more selective fishing gear or, where available, to licences for other non-salmon species. These mitigation measures allow for continued economic opportunity agreements under the communal-commercial licence, while helping reduce interactions with at-risk stocks.

Indigenous partners, harvesting groups and stakeholders have been calling for change. Fisheries and Oceans Canada has been listening – the many proposed projects in the PSSI answer that call for change. DFO has already begun consultations, using the vast knowledge that already exists on how best to bring about these changes and make the greatest impact on Pacific salmon sustainability.

The Department will also be engaging immediately with First Nations, harvesters, industry members and partners across the Pacific region on the impacts of the commercial closures and the collaborative development of the mitigation program. These much needed steps towards a new, modernized commercial salmon management system are part of the Harvest Transformation pillar under the \$647.1 million PSSI – the largest, most transformative investment Canada has ever made to save wild salmon.

The loss of salmon populations would be disastrous not just for the people and wildlife that depend on them as a food source, but also for the many BC communities whose jobs and ways of life depend on salmon. That’s why the Government of Canada has taken, and will continue to take urgent and concrete actions to ensure that salmon are protected for future generations.

Quotes

“What cannot be debated is that most wild Pacific salmon stocks continue to decline at unprecedented rates – we are pulling the emergency brake to give these salmon populations the best chance at survival. The decisions to implement new long term closures and permanently remove effort from the commercial salmon fishery were not easy, as they impact people, communities, and livelihoods. But with fewer and fewer returning every year – disappearing before our eyes – we have to act now. We will continue working closely with industry, Indigenous communities, and partners as we move forward with these initiatives and do everything in our collective power to save pacific salmon and ensure a sustainable future. Together, we will turn the corner.”

The Honourable Bernadette Jordan, Minister of Fisheries, Oceans and the Canadian Coast Guard

Quick facts

- The Government of Canada's \$647.1-million Pacific Salmon Strategy Initiative investment is the largest-ever government investment in efforts to save Pacific salmon. Through this investment, Canada will guide a strategic and coordinated long-term response, rooted in collaborative action, to stabilize and protect Pacific salmon for the ecosystems, people, and communities that depend upon their sustainability.
- The 2021-2022 Salmon Integrated Fishery Management Plans will be available soon, and a fishery notice will be released with further information once they are posted on the DFO library.

- Management measures in recreational fisheries implemented in recent years to protect salmon stocks of conservation concern continue to be required. Further details will be provided in final salmon IFMPs. (Recreational harvesters are requested to refer to the [DFO website](#) for current regulations in the area they plan to fish)
- Many salmon species migrate back to their natal rivers at the same time. In some marine areas larger commercial fisheries cannot selectively fish for abundant stocks without potentially catching at-risk stocks.
- In 2019, DFO published a State of Pacific Salmon report that outlined how salmon are responding to climate and habitat changes. Many key indicators show Pacific salmon stocks are declining to historic lows. For instance, 50 Pacific salmon populations are currently under consideration for potential listing under the *Species at Risk Act*, or pending assessment by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
- Pacific salmon have social, cultural, and economic significance for many Canadians. After conservation, the Department has a legal obligation to provide priority access for First Nations food, social and ceremonial (FSC) and treaty fisheries, but in recent years many have not been able to meet their harvest allocations because of low salmon returns.

Associated links

- [Backgrounder](#)
- [Fishery closure Information](#)
- [Pacific Salmon Strategy Initiative](#)

- [Pacific Salmon Facts](#)
- [State of Pacific Salmon Report](#)

Contacts

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Business and industry | general public | news releases | Hon. Bernadette Jordan

Date modified:

2022-06-22

Exhibit C



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[Canada.ca](#) > [Fisheries and Oceans Canada](#) > [Pacific Region](#) > [Fisheries](#)

> [Conservation and sustainable fisheries](#) > [Pacific marine mammals and sharks](#)

> [Killer whales](#)

2022 management measures to protect Southern Resident killer whales

i Area-based fishing closures for commercial and recreational salmon are in place in around Swiftsure Bank (portions of Subareas 20-1, 121-1 and 121-2) from July 15 until October 31, 2022; and a portion of the Juan de Fuca Strait (Subarea 20-5) from August 1 until October 31, 2022; and near the mouth of the Fraser River (Subarea 29-3) from August 1 to September 30, 2022. Specific coordinates can be found in [FN0730](#). More information below.

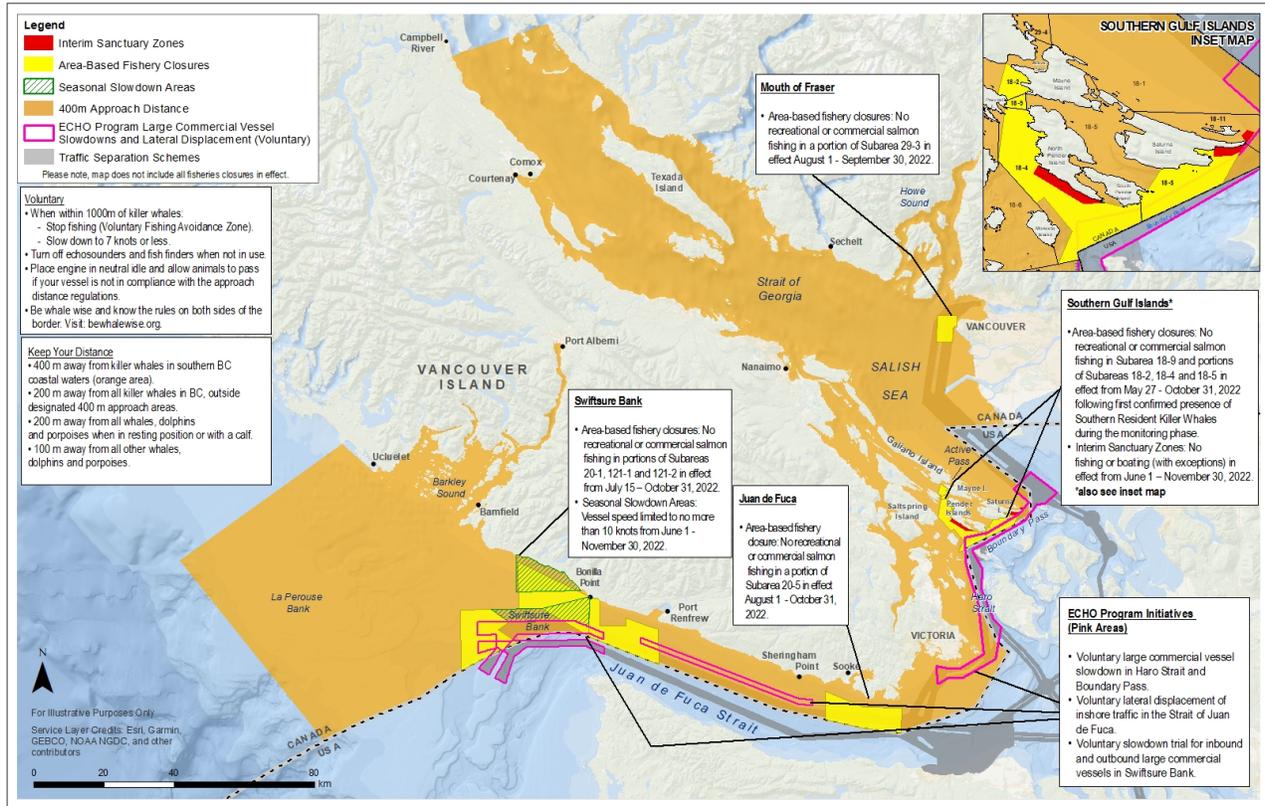
The decline of the endangered Southern Resident killer whale population is linked to threats such as noise and disturbance from boats, and reduced availability of their preferred prey, chinook salmon, as well as chum and coho salmon. Chinook salmon are a vital food source for Southern Resident killer whales but wild populations have declined dramatically in recent years. To address these threats, we are implementing management measures to protect salmon and to minimize disturbance from vessels. We have also initiated actions to reduce the threat of contaminants.

Maps of management measures

▼ Overview of management measures

Overview of management measures

[Download alternate format \(.PDF\)](#)



Overview of 2022 management measures to protect Southern Resident Killer Whales

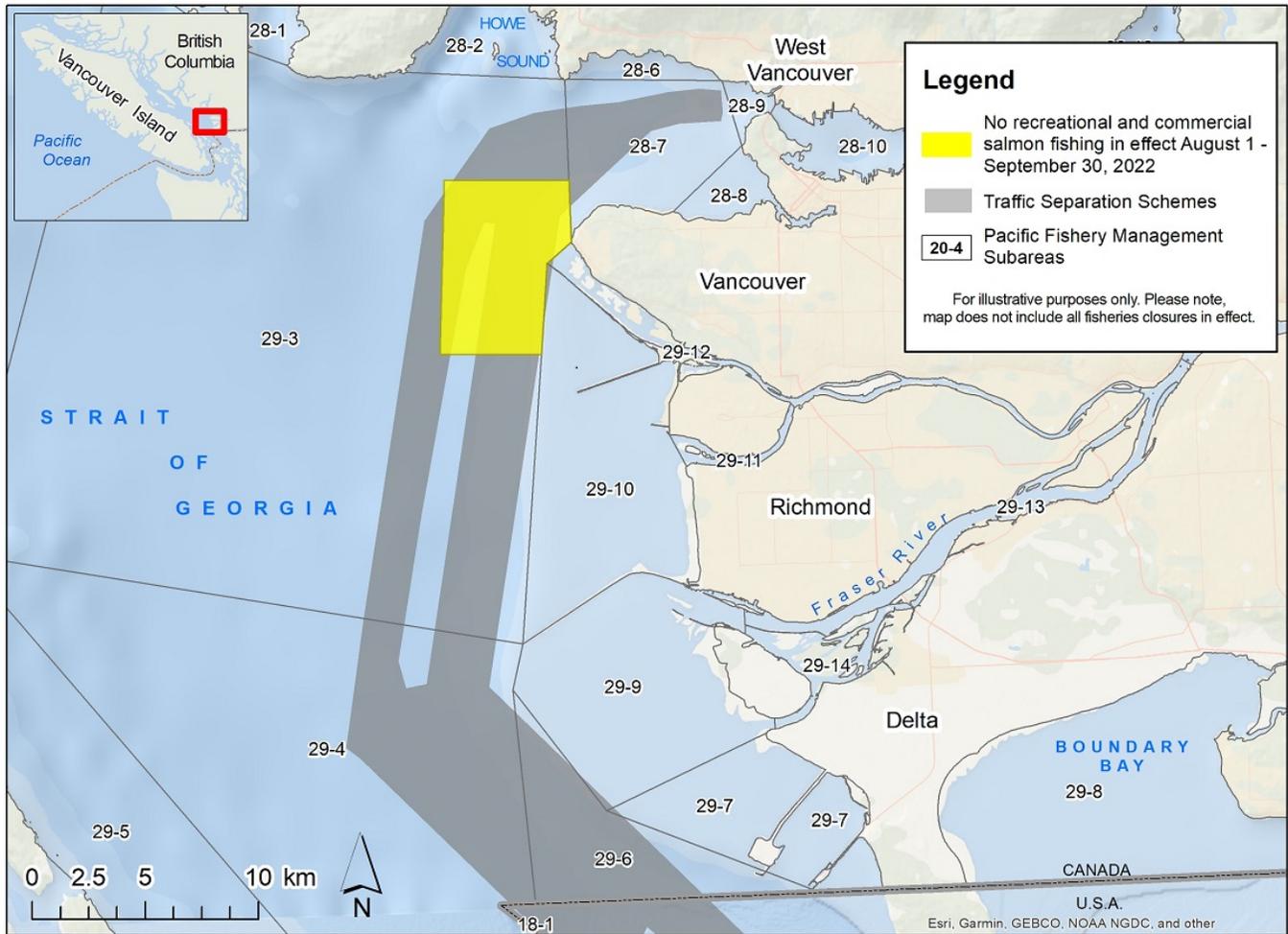


► Description: Overview of management measures to protect Southern Resident killer whales

▼ Mouth of the Fraser River

Mouth of the Fraser River management measures

[Download alternate format \(.PDF\)](#)



2022 Mouth of the Fraser management measures

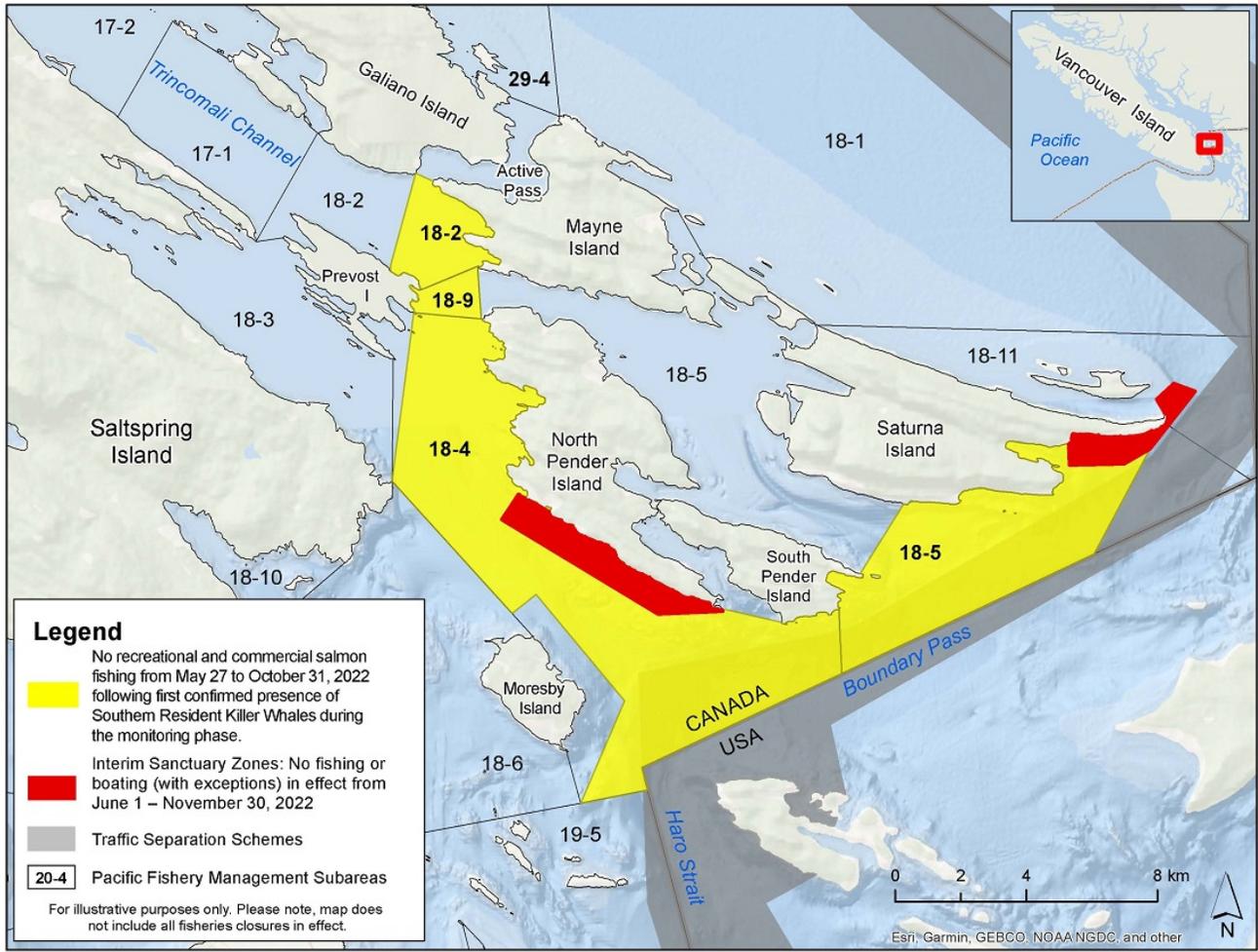


► Description: Mouth of the Fraser River management measures

▼ Gulf Islands

Gulf Islands management measures

[Download alternate format \(.PDF\)](#)



2022 Gulf Islands management measures

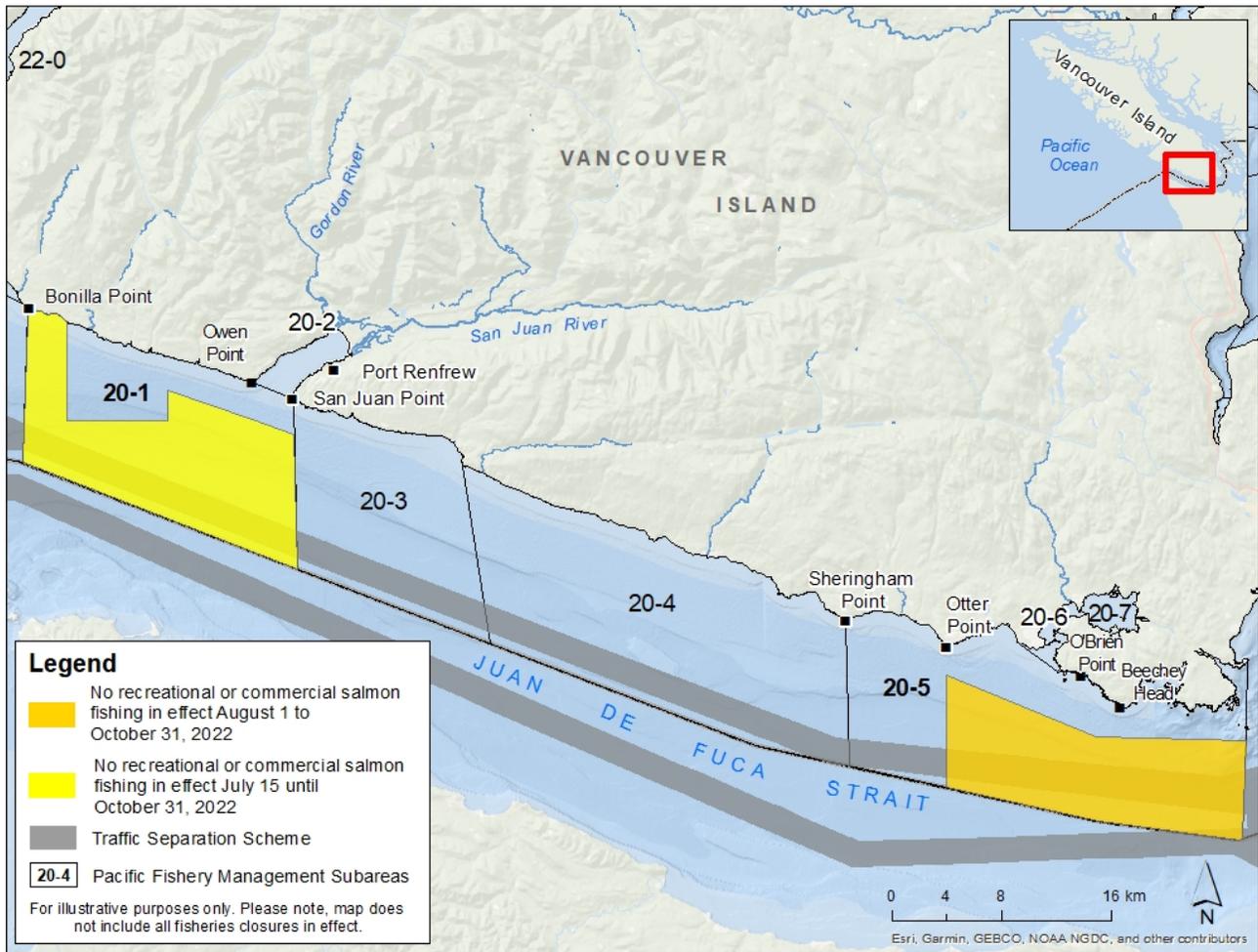


► Description: Gulf Islands management measures

▼ Juan de Fuca

Juan de Fuca management measures

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2022 Juan de Fuca management measures

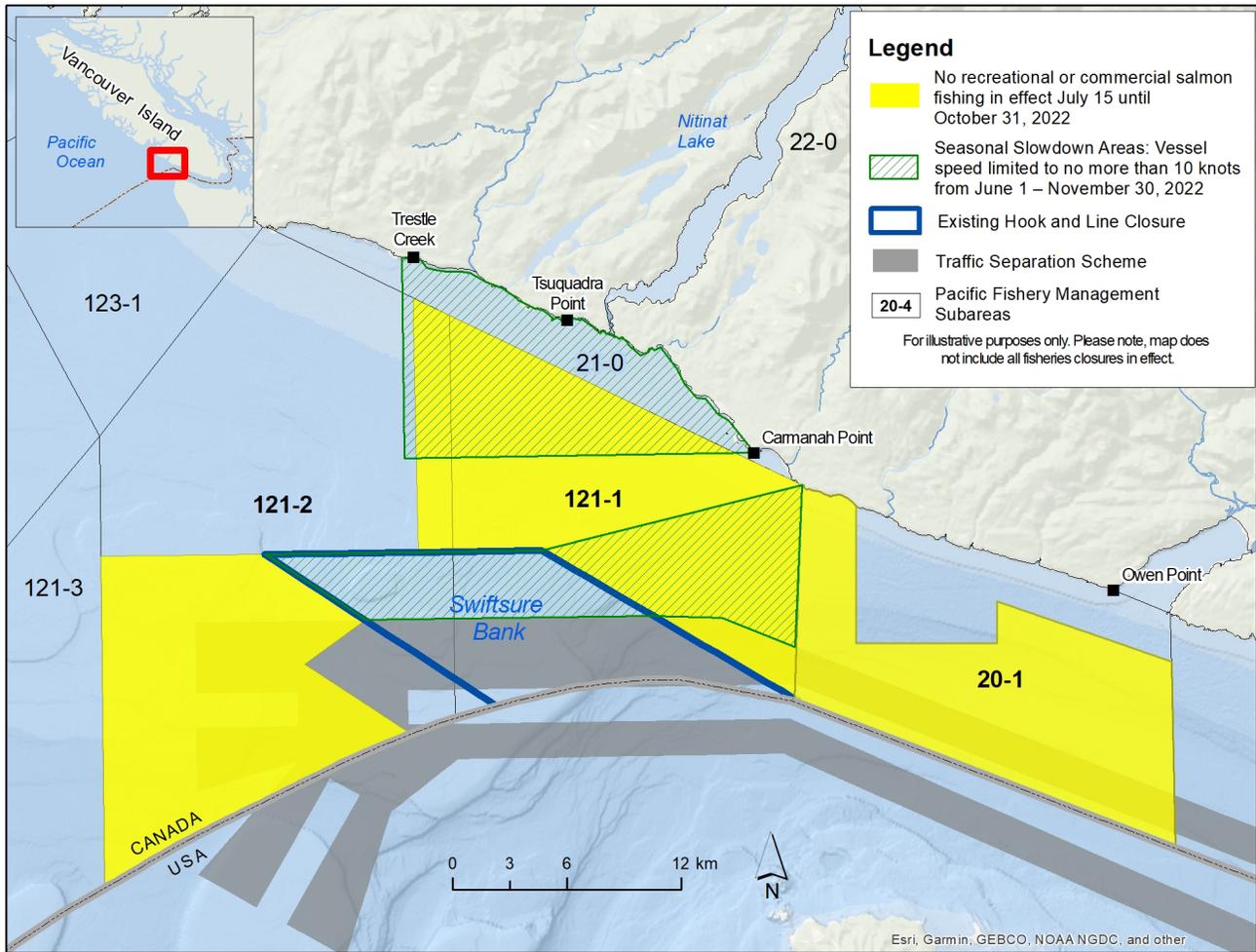


► Description: Juan de Fuca management measures

▼ Swiftsure Bank

Swiftsure Bank management measures

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2022 Swiftsure Bank management measures



► Description: Swiftsure Bank management measures

Area-based fishing closures

Fishery management measures include closures to help increase the availability of salmon and decrease vessel disturbance in key Southern Resident killer whale foraging (feeding) areas off the west coast of Vancouver Island (Swiftsure Bank), the Juan de Fuca Strait, the Gulf Islands, and at the mouth of the Fraser River within Southern Resident killer whale critical habitat.

Area-based fishing closures for commercial and recreational salmon are in place in around Swiftsure Bank (portions of Subareas 20-1, 121-1 and 121-2) from July 15 (following the expiry of the chinook non-retention measures) until October 31, 2022; and a portion of the Juan de Fuca Strait (Subarea 20-5) from August 1 (following the expiry of the chinook non-retention measures) until October 31, 2022. New in 2022, area-based fishing closures will be in place at the mouth of the Fraser River (Subarea 29-3) from August 1 to September 30, 2022.

Similar to 2021, a fishing closure protocol is in effect for the Southern Gulf Islands recreational and commercial salmon fisheries where fishery closures are triggered to be implemented by the first confirmed presence of Southern Resident killer whales in the area. The Vancouver Fraser Port Authority Enhancing Cetacean and Observation (ECHO) Program, working closely with its local partners, and our Whale Tracking Network began monitoring the area on May 5, 2022, and confirmed Southern Resident killer whale presence which initiated the closures from May 27 to October 31, 2022.

Fishers are also asked to voluntarily stop fishing (do not haul gear) within 1000m of killer whales as a best practice to reduce competition for their food and disturbance in their presence.

Interim Sanctuary Zones

To further reduce acoustic and physical disturbance from vessels in key portions of Southern Resident killer whale foraging areas, Interim Sanctuary Zones are in effect from June 1 to November 30, 2022.

Specifically, vessel traffic will be prohibited off North Pender and Saturna Islands as per the Interim Order enacted under the *Canada Shipping Act*.

Some exceptions will apply, for example vessels involved in Indigenous fishing for food, social or ceremonial purposes and vessels involved in emergency response.

Seasonal Slowdown Areas

2 new Seasonal Slowdown Areas are being piloted near Swiftsure Bank from June 1 until November 30, 2022. All vessels are required to slow down to a maximum of 10 knots while in the areas with limited exceptions. The first area is in the Protected Fisheries Management Area 121-1 and the second Seasonal Slowdown Area is located near the mouth of the Nitinat River from Carmanah Point to Longitude 125 degrees west. This measure is separate from the voluntary slowdowns coordinated by the ECHO Program.

Voluntary large commercial vessel measures

The Vancouver Fraser Port Authority ECHO Program is continuing the voluntary large Commercial Slowdown in Haro Strait and Boundary Pass, as well as Swiftsure Bank (inbound and outbound), as well as the lateral displacement in Juan de Fuca Strait.

Avoiding whales

To address vessel disturbance of killer whales, a mandatory vessel approach distance of never closer than 400m for all killer whales, as per the Interim Order enacted under the *Canada Shipping Act*, will remain in effect until May 31, 2023 in southern BC coastal waters between Campbell River and just north of Ucluelet.

The *Marine Mammal Regulations* remain in effect year-round. This requires staying:

- 200 metres away from all killer whales in Canadian Pacific waters other than those described above
- 200 metres away from all whales, porpoises and dolphins when in resting position or with a calf
- 100 metres for other whales, porpoises and dolphins

Boating around whales

When out on the water, there are additional actions you can take voluntarily to protect killer whales, as well as other marine mammals:

- Stop fishing (do not haul gear) within 1000m of killer whales
- Reduce speed to less than 7 knots when within 1000m of the nearest whale
- When safe to do so, turn off echo sounders and fish finders
- Place engine in neutral idle and allow animals to pass if your vessel is not in compliance with the approach distance regulations
- For more information on the best ways to help whales while on the water, on both sides of the border, please visit: [Be Whale Wise](#)

Contaminants

The Government of Canada continues to address the threat of contaminants by strengthening regulations, developing guidelines, and increasing research and monitoring. As part of the Government's effort to share information and data, the [Pollutants Affecting Whales and their Prey Inventory Tool \(PAWPIT\)](#), an interactive mapping tool, is now available online. The tool shows estimates of pollutant releases by all identified

sources within the habitats of Northern and Southern Resident killer whales and chinook salmon. The tool also displays estimated ambient contaminant loads in the Fraser River Basin, and indicates where environmental quality guidelines were exceeded.

Related links

- [Watching marine wildlife](#)
- [Parks Canada: Southern Resident killer whale outreach](#)
- [Reducing the threat of contaminants to Southern Resident killer whales](#)
- [Reports, publications and videos related to the protection of Southern Resident killer whales](#)
- [Interim Order for the Protection of the Killer Whale \(*Orcinus orca*\) in the Waters of Southern British Columbia, 2022](#)
- [Summary of input provided on management measures to address key threats to Southern Resident Killer Whales](#)

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